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Spring 2020

## EPS 202-452: Society, Technology and the Environment

Michael Bonchonsky

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EPS 202-452 SOCIETY, TECHNOLOGY, AND ENVIRONMENT  
NEW JERSEY INSTITUTE OF TECHNOLOGY  
Spring 2020

**Course Information**

**Lecture**

Time: Online, asynchronous

Location: Online

Canvas: <http://Canvas.njit.edu>, lectures posted on Canvas

E-mail: michael.p.bonchonsky@njit.edu; also at mickbon@aol.com

Office: Tiernan 365

Office Hours: M,Thurs 11:30-1:30 and by appt

**Number of Credits: 3**

**Course description:** Examines the relationships between the creation and use of technologies, the human and natural environment, and the development of social and cultural institutions.

**Prerequisites:** HUM 101

**Course-Section and Instructor**

Course-Section	Instructor
EPS 202-452	Michael P. Bonchonsky

**Office Hours for All Chemistry & Environmental Science Instructors:**

**Required Textbook:**

<b>Title</b>	Classic Edition Sources Notable Selections in Environmental
<b>Author</b>	Thomas Easton, ed.
<b>Edition</b>	5 <sup>th</sup> (available in NJIT bookstore or through on line vendors)
<b>Publisher</b>	McGraw Hill
<b>ISBN #</b>	ISBN: 9781308081939

**NJIT Academic Integrity Code:** All Students should be aware that the Department of Chemistry & Environmental Science (CES) takes the University Code on Academic Integrity at NJIT very seriously and enforces it strictly. This means that there must not be any forms of plagiarism, i.e., copying of homework, class projects, or lab assignments, or any form of cheating in quizzes and exams. Under the University Code on Academic Integrity, students are obligated to report any such activities to the Instructor.

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**University-wide Withdrawal Date:** The last day to withdraw with a **W** is April 6, 2020

### **Introduction and Objectives**

This course introduces students to the interdisciplinary field of environmental studies and explores the interrelationships between science, technology, environment, and society. We examine the social and scientific origins of environmental problems and evaluate the complex role of technology in creating and resolving these concerns. The perspective of the course is broadly social scientific, though this mode of investigation takes place against the background of a scientific appreciation of current environmental dilemmas. We will consider both the local and global implications of current social activities on the environment and investigate specific issues such as air pollution, water contamination, acid rain, ozone depletion, declining biodiversity, and climate change. Other topics include energy, food production, biotechnology, and the environmental implications of contemporary consumption practices.

### **II. Learning Outcomes:**

1. To develop students' sensibility to contemporary environmental/ecological problems and their roots and causes.
2. To enhance students' understanding of the complex and dynamic interactions among science, technology, environment and society.
3. To build up students' ecological citizenship with the social responsibility to develop solutions to contemporary environmental problems from personal, professional and societal perspectives.
4. To empower students with critical thinking skills and knowledge of sustainability, to effectively engage in community development and pursue successful careers in science, technology and engineering.
5. To nurture students' environmental entrepreneurship spirit in tackling the contemporary environmental problems with development and application of innovative science, technology and engineering practices.

### **III. Required Reading**

Students in this course should obtain the following materials from the NJIT bookstore or

through any of the commercial on-line dealers.

Thomas Easton, ed., Fifth edition, 2014, Classic Edition Sources Notable Selections in Environmental Studies, (in bookstore) **ISBN: 9781308081939** Stamford, CT: McGraw-Hill.

The assigned readings are designed to give you background knowledge needed to understand the subject matter covered in class. The readings listed for each topic should be read prior to the class. The more you are able to read, the better prepared you will be for class discussions. I will supplement the readings with handouts and journal articles that will be available on Canvas.

#### IV. Evaluation

The final grade of this course will be given in the following standards:

Final Grade	Overall Academic Performance (100%)
A	Above 90
B+	85-89
B	80-84
C+	75-79
C	70-74
D	60-69
F	Below 60

The evaluation of student performance in this course is based on five components:

- 1. Midterm examination (25%):** There will be a midterm exam comprised of multiple-choice or short-answer questions and brief essays. This exam will be based on course lectures, discussion sessions, and assigned readings. The midterm is scheduled on October 28th.
- 2. Final examination (25%):** There will be a final exam conducted during the end-of-semester exam period. The format of the final exam will be the same as the midterm exam; it will be based only on course material covered during the second half of the semester.
- 3. Class participation (10%):** Each week students are required to post an entry in the discussion forum for that week (200 word entries). This is important because it is your opportunity to post observations on the weekly material or to react to a classmate's posting. You are required to do this during each week by Sunday at 11:55pm (you can't go back after that week) for the full 10% of "class participation." Discussion posts are "all or nothing," so students will either receive full credit or no credit.
- 4. Quiz (20%):** A quiz will be given on Canvas each week to assess your familiarity with the weekly lectures and the required readings. There will be no make-up quizzes or late

submission under any circumstances. I will drop two lowest grades in calculating your final scores to accommodate any need to “miss” a quiz. Be aware: Academic Honor Code is applied.

**5. Writing Assignments (20%):** Two research papers will be required during the semester. The schedule for the assignments will be determined at the start of the semester (see the schedule on syllabus and in Canvas). Instructions for the assignments will be posted on Canvas prior to deadlines. All completed assignments must be submitted online on by 11:55pm on the day of the deadline.

**6. Extra Credit – environmental news bonus work (up to 5 pts):** You need to collect one piece of environmental news and write down your comments (reaction) in a paragraph. To earn the EC, you must submit 5 pieces of your work (attaching your news article) **spread throughout the semester** – recommend: one piece every other week.

## V. Important Notices

1. Students enrolled in this course are forewarned that the consequences of plagiarism or academic misconduct of any kind are severe. Violations will be handled in accordance with the rules outlined in the [Code of Student Conduct](#). If you are unfamiliar with these procedures, you should consult the appropriate section of this governing manual.

2. Please be sure to log into Canvas each week, take quizzes on prior week’s material, listen to a lecture, and post observations in the weekly discussion forum. From my end of Canvas, reports indicate to me when you enter and for how long at all times.

3. All quizzes and exams are closed book, closed notes, no aids.

### ***Using Respondus LockDown Browser and a Webcam for Online Exams***

Respondus LockDown Browser is a locked browser for taking exams in Canvas. It prevents you from printing, copying, going to another URL, or accessing other applications during a test. If a Canvas quiz requires that LockDown Browser be used, you will not be able to take the assessment or quiz with a standard web browser. You may be required to use LockDown Browser with a webcam (Respondus Monitor), which will record you during an online exam.

**This course requires the use of Respondus LockDown Browser and/or Respondus Monitor with a webcam for the midterm and final online exams.** The webcam can be built into your computer or can be the type that plugs in with a USB cable. Watch [this short video](#) to get a basic understanding of LockDown Browser and the webcam feature. A student [Quick Start Guide \(PDF\)](#) is also available.

1. Download and install LockDown Browser from this link:

<http://www.respondus.com/lockdown/download.php?id=264548414>

2. Once your download has finished, locate the “LockDown Browser” shortcut on the desktop and double-click it. (For Mac users, launch “LockDown Browser” from the Applications folder.)
3. You will be brought to the Canvas login page within the LockDown Browser, click “Login with your UCID” to log in with your NJIT UCID and password and then click Login.
4. Under “My courses”, click on the course in which you have to take the exam that requires the LockDown Browser.
5. After you enter the course, find the exam and click on it.
6. A confirmation prompt will appear, click the “Start attempt” button. Once a quiz has been started with LockDown Browser, you cannot exit until the Submit all and finish button is clicked.
7. If you are required to use a webcam (Respondus Monitor), you will be prompted to complete a Webcam Check and other Startup Sequence steps.

4. Final grades are not subject to post-semester adjustment—with the exception of the amendment of a grading error. Under no circumstances will students be given the opportunity to complete extra-credit papers or other assignments to bolster their final grades.

## **VI. Schedule (follow weekly dates as shown on Canvas)**

### **Introduction**

#### **Lecture 1 Intro**

Course outline and synopsis

Syllabus (Canvas) Study Guide (Canvas)

Week 1 Discussion

Practice Quiz

### **Worldviews and the Environment**

#### **Lecture 2 Worldviews**

Vitousek, “Human Domination of Earth’s Ecosystems,” Easton, pp. 33-40

Meadows, et al, “From Limits to Growth: the 30-year Update,” Easton, pp. 28-32

Diamond, “A Tale of Two Farms,” Easton, pp. 213-218

Video: The Environment: A Historical Perspective

Week 2 Discussion

Quiz 1

### **Origins of Environmentalism**

#### **Lecture 3 Origins**

Carson, “Silent Spring,” (Canvas)

Hardin, "The Tragedy of the Commons," Easton, pp. 23-27

Video: Silent Spring

Week 3 Discussion

Quiz 2

## **Wilderness**

### **Lecture 4 Wilderness**

Muir, "The Mountains of California," Easton, pp. 5-7

Pinchot, "The Fight for Conservation," Easton, pp. 8-9

Leopold, "A Sand County Almanac....," Easton, pp. 10-12

Marsh, "From Man and Nature", Easton, pp 1-4

Video: Wilderness idea

Week 4 Discussion      Quiz 3

## **Toxics and Risk in the Environment**

### **Lecture 5 Environmental Pollution**

Paigen, "Controversy at Love Canal," Easton, pp. 106-112

Steingraber, "Living Downstream: An Ecologist Looks at Cancer and the Environment," Easton, pp. 157-161

Colborn, et al, "Our Stolen Future," Easton, pp. 162-164    Video: Love Canal

### **First Writing Assignment, Due Oct 10**

Week 5 Discussion

Quiz 4

## **Environmental Health and Water Resources (Quiz 4)**

### **Lecture 6 Water Pollution and Env. Health**

Palmer, et al, "Restoring Rivers," Easton, pp 113-117

Video: Tapped, concerns issues with bottled water

Week 6 Discussion

Quiz 5

## **Chemical and Manufacturing Industries: Can They Ever be Green?**

### **Chemical and Manufacturing Ind.**

McDonough, "Cradle-to-cradle design: creating healthy emissions – a strategy for eco-effective product and system design," (Canvas)

Video: The Next Industrial Revolution (Cradle to Cradle)

Week 7 Discussion

Quiz 6

## **Week 7 Review this week as posted and Midterm Exam designated on Canvas**

## **Energy Policy and Global Impacts**

### **Lecture 8 Energy**

Lovins, "From 'More Profit with less Carbon'" Easton, pp. 65-69

Flavin and Dunn, "Reinventing the Energy System," Easton, pp. 70-75

Video: The Big Energy Gamble (California State experience) (PBS)

Week 9 Discussion

Quiz 7

- Last day to withdraw (check registrar's academic calendar).

## **Climate Change and International Agreements**

### **Lecture 9 Climate Change**

The Intergovernmental Panel on Climate Change, "Climate Change 2007," Easton, pp. 127-135

Video: Global Warming (PBS)

Week 10 Discussion

Quiz 8

## **Population Growth**

### **Lecture 10 Population**

Ehrlich, "The Population Explosion...", Easton, pp. 183-188

Cohen, "How Many People Can the Earth Support," Easton, pp. 193-196

Video: World in Balance

Week 11 Discussion

Quiz 9

**Second Writing Assignment, see Canvas due date**

## **Sustainable Development**

### **Lecture 12 Sustainability**

World Commission on Environment and Development, "Our Common Future," Easton, pp. 198-202

Annon GEO 3 Report (Canvas)

Week 12 Discussion

Quiz 10

## **Food**

Berry, "The Unsettling of America: Culture and Agriculture," Easton, pp. 137-140

Brown, "Food Scarcity: An Environmental Wake-Up Call," Easton, pp. 141-145

Video: Food Inc.

Week 13 Discussion

Quiz 11

## **Biodiversity, Biotechnology and Species Conservation**

### **Lecture 13 Biodiversity**

Wilson, "The Current State of Biological Diversity," Easton, pp. 86-90

Shiva, "Women's Indigenous Knowledge and Biodiversity Conservation," Easton, pp. 209-212

Vandermeer, "Rethinking Rain Forest: Biodiversity and Social Justice," Easton, pp. 95-101

Video: Crash: A Tale of Two Species

Week 14 Discussion

Quiz 12

## **Exam Review**



Final Exam period begins as shown on Canvas and University academic achedule. Exam date will be scheduled by registrar

## **VII. Resources for NJIT Online Students**

### IST Service Desk

The IST Service Desk is the central hub for computing information and first point of contact for getting help and reporting issues related to computing technology at NJIT.

Students can put in a ticket with the service desk: <https://servicedesk.njit.edu/CherwellPortal/IST>

or call (973) 596-2900 Monday - Friday from 8:00am – 9:00pm

### Academic Advising Success Center

“...assist in the advisement of students who are undecided in their major, transitioning into another major at NJIT, and those students who need additional support to graduate successfully and in a timely manner.”

### Academic Integrity

“New Jersey Institute of Technology is an institution dedicated to the pursuit of knowledge through teaching and research. The university expects that its graduates will assume positions of leadership within their professions and communities. Within this context, the university strives to develop and maintain a high level of ethics and honesty among all members of its community. Imperative to this goal is the commitment to truth and academic integrity. This commitment is confirmed in this NJIT University Code on Academic Integrity.”

### Academic Support and Student Affairs

“From questions about becoming a student at NJIT – to student engagement – to searching for information on career development, the Division of Academic Support and Student Affairs Staff is here to help.”

### Additional Tutoring Centers

[Math Learning Center](#); [Chemistry Learning Center](#); [The Writing Center](#); [ECE Study Groups](#)

### Bookstore

“Show your New Jersey Institute Of Technology pride all year long with our authentic assortment of New Jersey Institute Of Technology collegiate apparel...Plus, our selection of [textbooks](#), [computers](#), and [supplies](#) will ensure every New Jersey Institute Of Technology student is prepared for success.”

### Center for Counseling and Psychological Services

“The NJIT Center for Counseling and Psychological Services (C-CAPS) is committed to assisting students in the achievement of their academic goals as well as benefiting from their personal experience on campus. College life can be personally challenging and stressful at

times. We believe that the educational process is an important component of the development of the individual as a whole person. Our goal is to optimize the college experience and improve the quality of the lives of our students by promoting their mental health and facilitating students' personal, academic and professional growth."

#### Disability Support Services

"The Disability Support Services office works in partnership with administrators, faculty and staff to provide reasonable accommodations and support services for students with disabilities that have provided our office with documentation to receive services."

#### The Learning Center

"Our mission is to assist students both in the classroom and beyond by providing tutorial services, academic coaching, academic and personal enrichment workshops and staff and peer support so students can meet the demands of their coursework and are prepared for life after graduation."

#### Canvas Help Page

Tutorials for students.

#### Robert W. Van Houten Library

"The Van Houten Library offers electronic and print resources essential to the mission of New Jersey's science and technology university, including a core collection of academic books, databases, and journals, as well as research and consultation services."

#### Student Financial Aid Services

"Student Financial Aid Services (SFAS) at NJIT is committed to providing you with every opportunity to obtain funding to support your undergraduate educational costs at NJIT."

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## Spring 2020 Academic Calendar

January	20	Monday	Martin Luther King, Jr. Day
January	21	Tuesday	First Day of Classes
January	25	Saturday	Saturday Classes Begin
January	31	Friday	Last Day to Add/Drop a Class
January	31	Friday	Last Day for 100% Refund, Full or Partial Withdrawal
February	1	Saturday	W Grades Posted for Course Withdrawals
February	3	Monday	Last Day for 90% Refund, Full or Partial Withdrawal, No Refund for Withdrawal after this date
February	17	Monday	Last Day for 50% Refund, Full Withdrawal
March	9	Monday	Last Day for 25% Refund, Full Withdrawal
March	15	Sunday	Spring Recess Begins - No Classes Scheduled - University Open
March	22	Sunday	Spring Recess Ends
April	6	Monday	Last Day to Withdraw
April	10	Friday	Good Friday - No Classes Scheduled - University Closed
May	5	Tuesday	Friday Classes Meet
May	5	Tuesday	Last Day of Classes
May	6	Wednesday	Reading Day 1
May	7	Thursday	Reading Day 2
May	8	Friday	Final Exams Begin

*Department of Chemistry & Environmental Science*

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